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SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT  
PERU, 5 JANUARY 1976

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APRIL 1976

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**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT**  
**Peru, 05 January 1976**

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**APRIL 1976**

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ACCESSION NO.	
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SDCS EVENT REPORT NO. 80

Peru, 5 January 1976

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	$m_b$	$M_s$
NORSAR	02:45:10.1	02:31:27	14 S	074 W	6.0	N/A

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

02:31:24.8    13.6S    075.1W    6.2    4.8

All SDCS stations were operational during this period.

The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations. All LP channels at HN-ME and the LP radial channel at RK-ON had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at all SDCS stations were rotated.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

# STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	33 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	KS36000	KS36000
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18500	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be  $16^\circ \pm 5^\circ$  based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

# HYPOCENTER DETERMINATION

INPUT FOR EVENT 5 JAN 76  
02:31:30.0 13.999S 74.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST	REST	REST
CPSO	02 40 19.1	-0.2	-0.2	49.9	348.9
FN-WV	02 40 35.0	-0.3	-0.3	52.0	355.7
FN-ME	02 41 31.6	0.7	0.7	59.8	5.8
PK-ON	02 42 12.5	-0.7	-0.7	66.1	347.3
LAO	02 42 13.9	0.6	0.6	66.1	337.1
WH2YK	02 " 15.2	0.0	0.0	87.8	334.8
NAO	02 45 10.1	-0.2	-0.2	99.8	29.7

## 67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
02:31:21.5	13.607S	75.152W	-19. CALC	0.5	5	7
02:31:24.8	13.560S	75.148W	0. REST	0.5	3	7

CALC				REST			
5 . 2				5 . 2			
0	.	0	0	0	.	0	0
0	0.	0	0	0	0.	0	0
.	.	.	.	.	.	.	.
0	0.	0	0	0	0.	0	0
0	.	0	0	0	.	0	0
0	0.	0	0	0	0.	0	0

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 1.00  
MAJOR 86.7KM. MINOR 62.9KM. AZ= 28 AREA= 17152 SQ.KM. REST

# DATA SUMMARY

INPUT FOR EVENT 5 JAN 76  
02:31:30.0 13.999S 74.000W 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIP	DIST
		TIME					MB	MS		
CPSO	EP	02 40 19.1		SPZ	1.2	825.	6.33			49.9
CPSO	LQ	02 56 40.0		LPT	21.0	163.				
CPSO	LR	02 58 52.0		LPZ	30.0	106.		4.84		49.9
FN-WV	EP	02 40 35.0		SPZ	1.2	647.	6.21			52.0
FN-WV	LQ	02 57 14.0		LPT	27.0	46.				
FN-WV	LR	02 59 55.0		LPZ	33.0	314.		5.33		52.0
FN-ME	EP	02 41 31.6		SPZ	1.2	393.	6.09			59.8
HN-ME	LQ	03 00 23.0		LPT	20.0	127.				
HN-ME	LR	03 00 50.0		LPZ	45.0	96.		4.88		59.8
RK-ON	EP	02 42 12.5		SPZ	1.1	724.	6.56			66.1
RK-ON	LQ	03 04 24.0		LPT	23.0	90.				
LAO	EP	02 42 13.9		SAB	0.0	0.				
WH2YK	EP	02 44 15.2		SPZ	1.9	437.	6.42			87.8
WH2YK	LQ	03 15 06.0		LPT	28.0	39.				
WH2YK	LR	03 22 14.0		LPZ	20.0	50.		4.76		87.8
NAO	EP	02 45 10.1		AB	1.3	48.	5.80			99.8

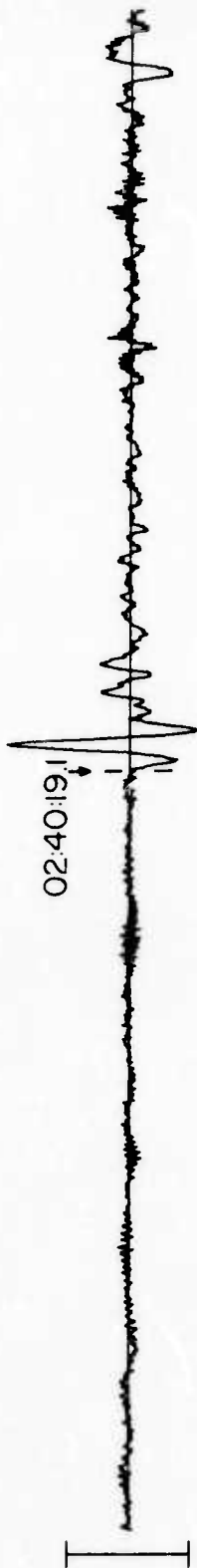
ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LP MAG	LP SDV	LP STA
02:31:21.5	13.607S	75.152W	0. CALC	6.24	0.27	6	4.76*****		1
02:31:24.8	13.560S	75.148W	0. REST	6.24	0.27	6	4.76*****		1

Average long-period magnitude ( $M_s$ ) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

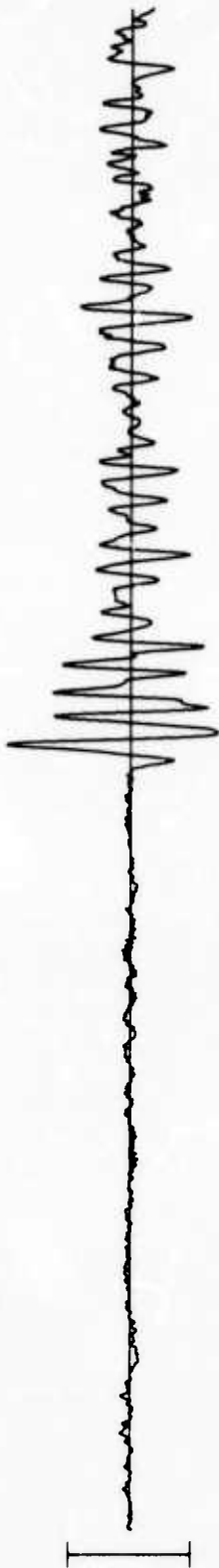


CPS0 05 JAN 76

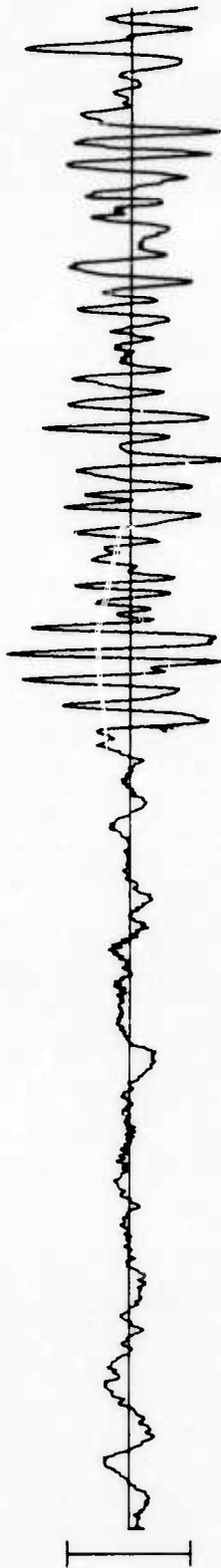
SPZ  
477.07 MU



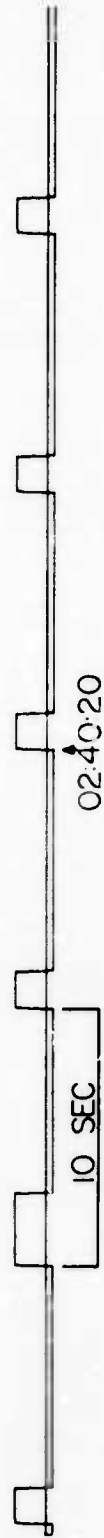
SPR  
157.81 MU



SPT  
40.07 MU



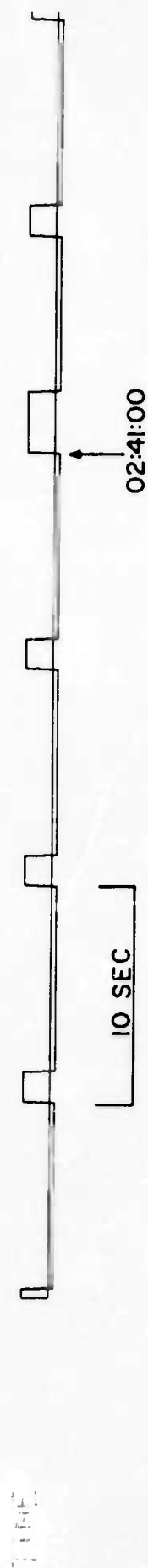
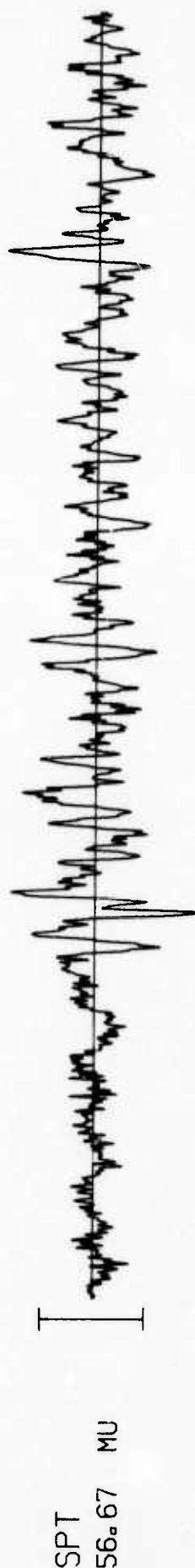
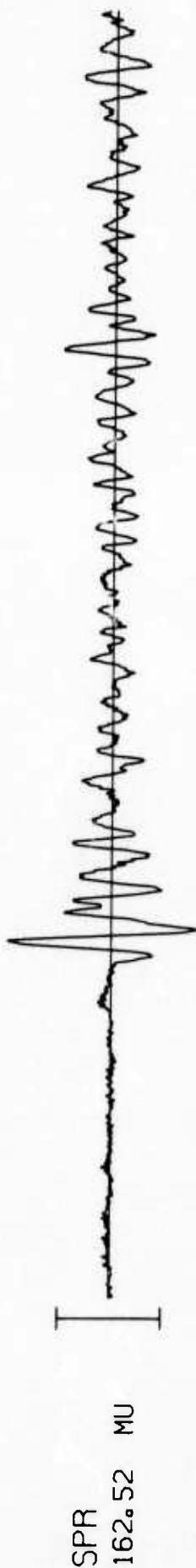
TIME



02:40:20

10 SEC

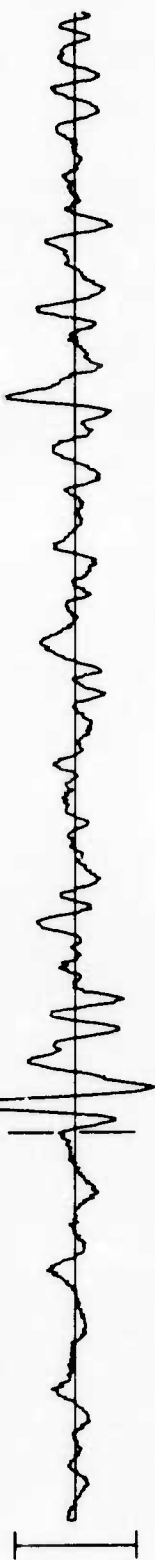
FN-WV 5 JAN 76  
02:40:35.0



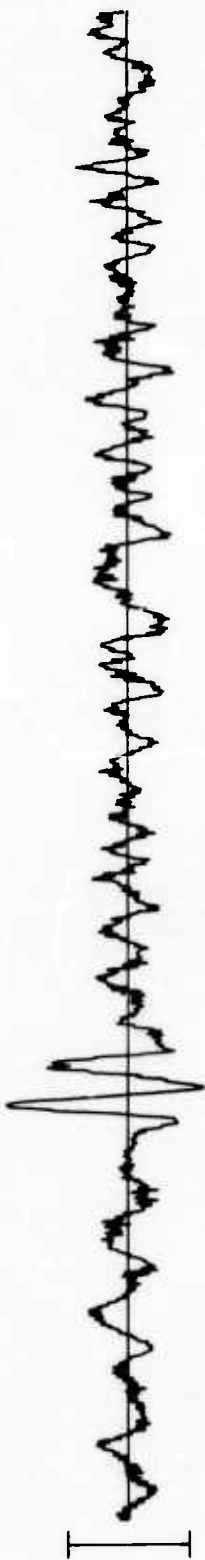
HN-ME 5 JAN 76

02:41:31.6 ↓

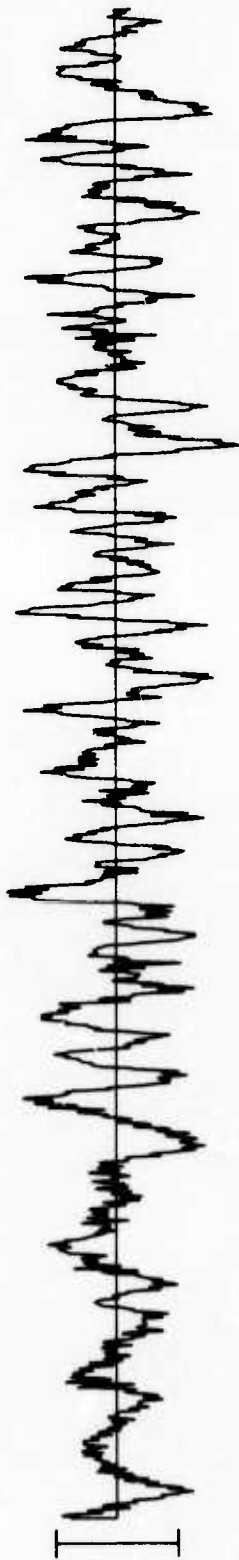
SPZ  
223.83 MU



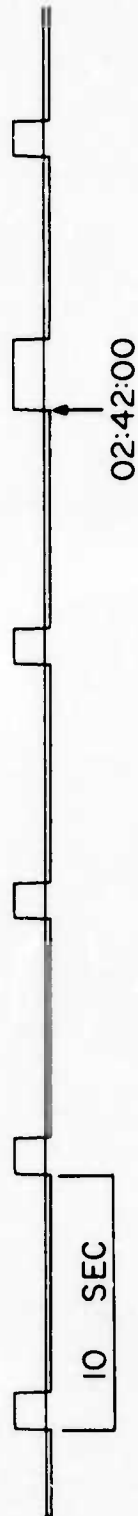
SPR  
141.55 MU



SPT  
49.04 MU



TIME



RK-QN 05 JAN 76

SPZ  
316.64 MU



SPR  
138.91 MU



SPT  
49.82 MU

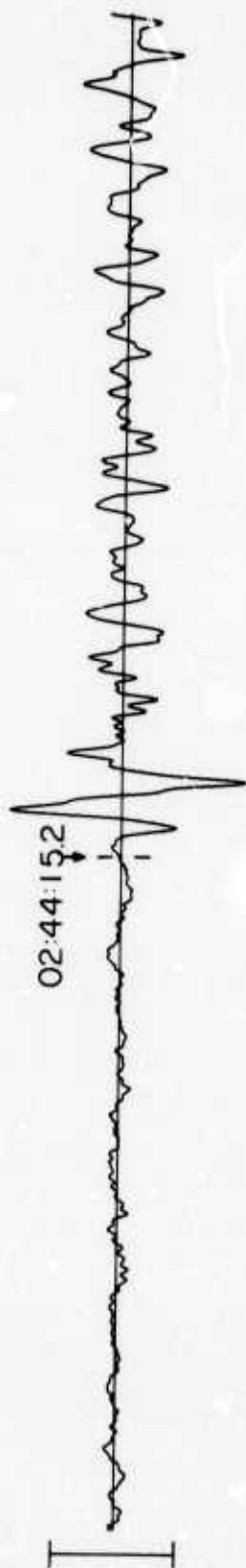


TIME



WH2YK 05 JAN 76

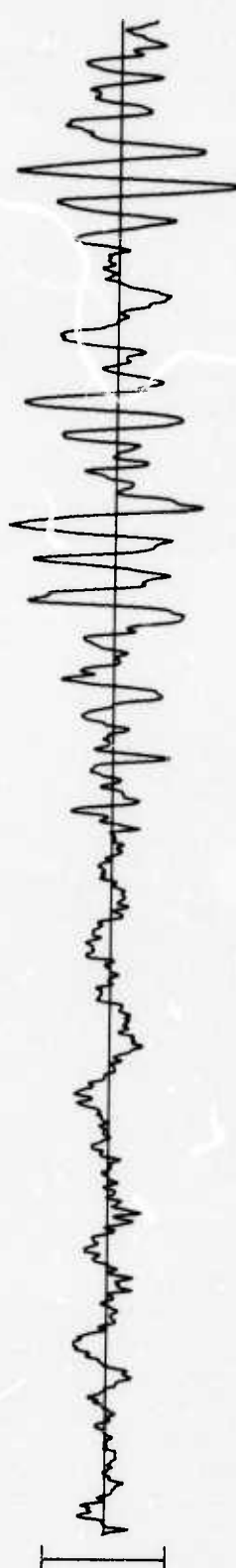
SPZ  
69.52 MU



SPR  
28.86 MU



SPT  
27.13 MU



TIME



CPS0 5 JAN 76

LPZ  
1431.85 MU

POSSIBLE LR  
03:02:32

02:58:52

LPR  
1200.36 MU

02:56:40

LPT  
1859.49 MU

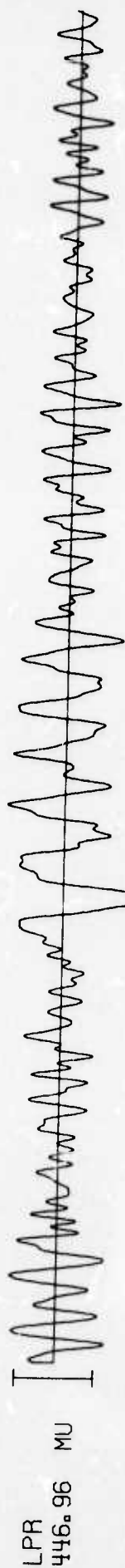
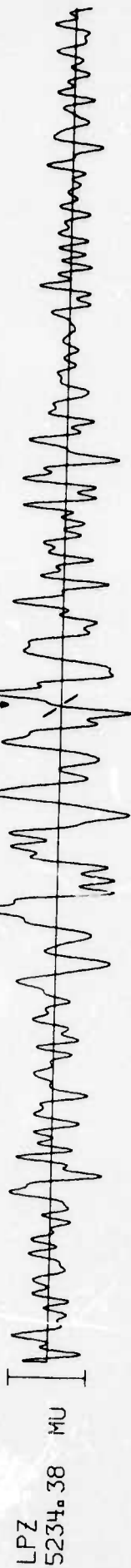
TIME

2 MIN

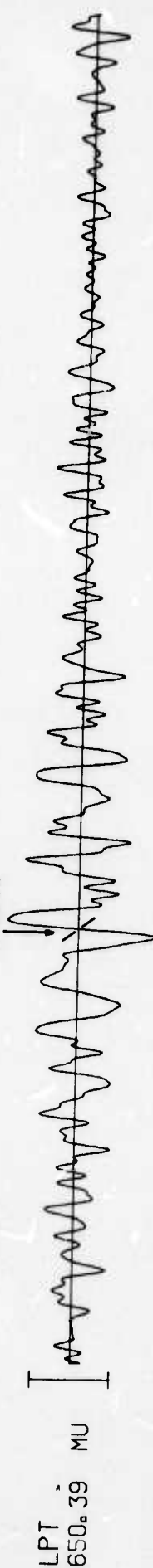
03:00:00

FN-WV 05 JAN 76

02:59:55



02:57:14



TIME



HN-ME 5 JAN 76

↓ 03:00:50

LPZ  
1766.95 MU



LPR  
1641.90 MU



↓ 03:00:23

LPT  
1183.73 MU



TIME



2 MIN

↓ 03:05:00



RK-ON 5 JAN 76

POSSIBLE LR  
03:10:01

LPZ  
2191.84 MU



LPR  
1169.87 MU



03:04:24

LPT  
1165.42 MU



TIME



2 MIN

03:10:00

WH2YK 05 JAN 76

LPZ  
826.67 MU

03:22:14



LPR  
661.05 MU

03:5:06



LPT  
602.41 MU



TIME

